Quality Systems Manual
Materials Division

Section 5 --Quality System Actions

Subcontractor Quality Assurance

Services

The Utah Department of Transportation (UDOT) uses outside consultants only for specialized consulting and analytical testing services such as :

< standards calibration
< petrographic analysis
< silicone concrete joint sealants
< curing compounds
< SHRP level II and III mix design analysis.

Documentation required

UDOT uses an extensive process to select specialized testing consultants. To be considered for selection, outside consultants must submit procurement documents which describe:

< testing procedures they will perform
< controlling specifications which apply to those tests
< QC procedures they will follow

QC Procedures

The outside consultants' QC procedures must align closely with a UDOT approved QC program and must include at least the following essential elements:

a. identification and control of sample
b. test planning and procedures
c. test control
d. calibration of test and measuring equipment
e. test and quality control records
g. training and certification of personnel

Selection of outside consultants will follow formal guidelines as approved by UDOT Division of Consultant Services. A manual outlining the guidelines for the selection of consultants is available to every division of UDOT.

The UDOT engineer in the appropriate area of responsibility will review reports and operations of the contracted consultant testing services for compliance to this manual. Appropriate corrective action will be implemented and documented where necessary.

AMRL Sample and On-Site Inspection Procedures

General

The Engineer for Pavement Design and Tests will

1. Review all reports pertaining to proficiency sample testing, on-site inspection and quality system evaluations
2. Inform the Laboratory Supervisor of poor results or differences

The Laboratory Supervisor will ensure that corrective action is taken and documented.

Proficiency Sample Testing

Participation:

AMRL Soil Proficiency Sample Program
AMRL Bituminous Proficiency Sample Program
AMRL Aggregate Proficiency Sample Program
CCRL Concrete Proficiency Sample Program

Identifying Poor Results:

A poor result is beyond two standard deviations from the average value (a rating lower than 3)

Procedures to Follow When Poor Results Occur:

1. Determine if the agency conducting the program correctly entered the data reported
2. Determine if the test result obtained was properly transferred to the data sheet submitted
3. Determine if all calculations leading to the test results obtained were correct
4. Determine if the equipment used to perform the test meets specification requirements
5. Determine if the procedures followed when performing the test conform to specification requirements
6. Repair or replace defective equipment or instruct the technician of the correct procedure to follow
7. Prepare a memorandum of record
   A. summarizing the results of the investigation
   B. identifying the cause of the poor results if determined
   C. describing any corrective action taken

On-Site Inspections

Participation:

AMRL Soils Inspection
AMRL Bituminous Inspection
AMRL Aggregate Inspection
CCRL Portland Cement Concrete Inspection

Procedure to Follow For Apparatus Deficiencies:

1. Determine if the equipment meets specification requirements
2. Repair or replace the equipment if it is defective
3. Prepare a memorandum of record summarizing the results of the investigation and any corrective action taken
4. Send a copy of the memorandum to the Federal Highway Administration

Procedure to Follow For Procedural Deficiencies:

1. Discuss each procedural deficiency with the testing technician and review the proper procedure
2. Observe the technician perform the test properly
3. Prepare a memorandum of record summarizing the action taken
4. Forward a copy of the memorandum to the Federal Highway Administration

Procedure to Follow For Quality System Deficiencies

The Engineer for Materials will

1. Review each deficiency cited by the evaluator with the responsible employee
2. Take appropriate action
3. Prepare a memorandum of record summarizing the action taken
4. Send a copy of the memorandum to the Federal Highway Administration

Procedures for Handling Technical Complaints

Upon receipt of a technical complaint, the following actions shall be taken:

1. The Engineer for Materials and the Supervisor of the Laboratory in question are notified of the complaint.

2. The Lab Supervisor contacts the complainee to verify all aspects of the complaint and establish a resolution date if necessary.

4. The Lab Supervisor reviews all reports, records and pertinent data and checks all calculations for accuracy.

5. The Lab Supervisor consults with the the technician(s) performing the test is to determine if any unusual problems or circumstances have influence the situation.

6. The Lab Supervisor reports all information gathered to the Engineer for Materials.

7. The Engineer for Materials formulates an appropriate reply to the complainant and provides a copy of the reply to the complainee.

Quality Improvement Team

Quality System Review Procedures

Troy Peterson, as Engineer for Quality Assurance, will complete the Quality System Review procedure as follows:

1. Review the following records, reports, and associated documentation every six months to ensure that established quality procedures are being adhered to:

   a) Proficiency Sample Reports
   b) On-Site Inspection Reports
   c) External Quality System Evaluation Reports
   d) Equipment Calibration, Verification & Inspection Records
   e) Test Technician Training Records
   f) Test Technician Evaluation Records

2. At each 6-month review
   a. Discuss any deficiencies noted with appropriate staff
   b. Ensure that necessary corrective action is taken
   c. Prepare a memorandum to the Engineer for Materials describing the items reviewed, the deficiencies identified, and the corrective action taken

3. Maintain in his office a file containing all documents relating to quality system review